

SERIES | CATALOG



# CSW CUSTOM BUILT-IN HIGH PERFORMANCE SUBWOOFERS

These are the built-in subwoofers and dedicated power amplifier for custom home installations that will raise the roof beams with their performance as they tuck out of sight to blend with any architectural style or interior design. If you're looking for tight, musical bass, you've found your subwoofers.

### CSW SUBWOOFERS COMBINE ULTRA-PERFORMANCE WITH ULTRA-RELIABILITY

The subwoofers' long-throw designs have been thought out with not only big, robust performance in mind, but ultra-reliability, too. Massive motor structures, each employing a tall coil, have been Klippel laser-optimized to perfectly position the voice coil in the magnetic gap, helping ensure a linear excursion of 25mm peak to peak. The CSW100 and CSW200, as well as the CSW155, use dual spiders for symmetric excursion stiffness. The overall result is tight, superbly detailed, lower distortion bass.

## CSW155 AN IN-WALL THAT ACTUALLY OUTPERFORMS MANY FREESTANDING POWERED SUBWOOFERS

The CSW155 is for anyone who covets uncompromising bass performance in a nearly invisible package. The CSW155's single 10" diameter driver is the shallowest ever engineered by Polk, ensuring the CSW155 fits easily in a wall. This is really big bass that's created with ultra-reliability in mind. A massive 2" voice coil for high output and power handling, plus dual spiders that ensure linear excursion and prevent bottoming out are just some of the features that ensure ultimate performance and reliability. A 15 1/2" x 17 1/2" perforated grille that mimics the look of an air register is included with the CSW155. The CSW155 stands 60" tall but fits comfortably between standard 16" on-center studs.



CSW155

#### **CSW155 HONORS**





### **LAMINAR FLOW PORT**

The wide, long Laminar Flow Port in the custom install subs dramatically reduces bass turbulence, noise and distortion. This is because the cross-sectional area of the port is larger than the largest possible round port that would fit into subs of this convenient size. The port's solid upper wall helps reinforce the cabinet, making it less prone to energy-stealing resonance. This rigid, large-area vent promotes and concentrates smooth, less-turbulent air flow throughout the enclosure, pouring out a tidal wave of precise, thunderous bass. See more about Laminar Flow Port at www.polkaudio.com/catalog/technology/.



- Designed for in-wall use; fits comfortably between standard 16" OC (on-center) studs.
- Single 10" diameter driver is the shallowest subwoofer Polk has ever engineered.
- Klippel Optimized Woofer—a state-of-the-art Klippel Distortion Analyzer enabled our engineers to optimize the woofer's motor structure, voice coil alignment and suspension for the best possible performance, with low distortion, even at extreme listening levels.
- Neodymium motor structure—made the sub's shallow depth possible without compromising performance.
- Cast aluminum basket is rigid and as well as inert to suppress resonance.
- Massive 2" voice coil for high bass output and high power handling.
- Inverted roll surround—highly reliable design maintains its "springiness" over time.
- Dual spiders ensure linear excursion and prevent the driver from bottoming out.
- Rigid MDF Slot Ported Enclosure—the port cross section runs the width of the grille.
- Steel plate on the back of the cabinet stiffens the enclosure for better performance.
- 15 1/2" x 17 1/2" perforated aluminum grille included.
- All mounting hardware and isolation pads included.

OVERALL DIMENSIONS: 60" L X 14" W X 3 3/8" D (152.4CM H X 35.56CM W X 8.57CM D) OVERALL FREQUENCY RESPONSE: 30HZ-140HZ

SEE SPECIFICATIONS FOR MORE DETAILED PRODUCT INFORMATION.



FITS BETWEEN STANDARD 16" OC STUDS



IN-WALL SUBWOOFER WITH GRILLE

### **KLIPPEL OPTIMIZATION**

In order for a driver to reproduce complex sounds accurately, the cone must move in exactly the same distance and manner in both directions of travel. If the cone moves 5 mm in the forward direction and only 4mm in the backward direction in response to a given signal, the sound will be distorted. In order for the driver to move accurately in both directions equal force must be applied to the cone and the cone must be able to move as far and as freely in both directions. A Klippel Distortion Analyzer employs a laser and sophisticated software to do large scale analysis of drivers in motion and enables us to optimize the motor structure, voice coil alignment and suspension to yield the best possible performance.





#### **CSW200**

For ultimate performance, there's the CSW200, with a direct radiating 10" driver in a 1.5 cubic foot slot load vented MDF enclosure. The CSW200 produces robust bass down to the lowest audible frequencies, thanks to its substantial size and long-throw woofer. With its 12" x 12" grille, the CSW200 is for those who place a premium on performance over size or unobtrusiveness.

- Direct-radiating Laminar Flow Port enclosure is designed for floor and ceiling installations.
- Fits engineered floor joists and I-beam construction.
- 10" Long-throw driver with dual spiders for long excursion control.
- Klippel optimized driver.
- Designed specifically for floor and ceiling installations.
- Mounting hardware and isolation pads included.
- 12" X 12" grille (not included).
- 5 year warranty.

OVERALL DIMENSIONS: 34 1/8" L X 13" W X 9" D (86.68CM H X 33.02CM W X 22.86CM D) OVERALL FREQUENCY RESPONSE: 22HZ-140HZ

SEE SPECIFICATIONS FOR MORE DETAILED PRODUCT INFORMATION.



The CSW100 becomes practically invisible in a ceiling or a floor. It can also tuck away in an entertainment cabinet or other furniture. A single 10" woofer plus patented Polk Audio technology—High Velocity Compression Drive® Bandpass Alignment—helps produce a gutsy, driving bass that other similarly sized built-ins can't equal. Bass frequencies launch out of the enclosure via an unobtrusive 3" x 12" vent. The CSW100 comfortably fits in standard joist spacing.

- 10" Long-throw driver with dual spiders for long excursion control.
- Klippel optimized driver.
- Patented High Velocity Compression Drive. bandpass alignment with slot port venting.
- Designed specifically for floor and ceiling installations.
- Fits engineered floor joists and I-beam construction.
- Mounting hardware and isolation pads included.
- Sound launches from an unobtrusive 3" x 12" grille.
- 5 year warranty.

OVERALL DIMENSIONS: 26 1/4" L X 13" W X 9" D (66.68CM H X 33.02CM W X 22.86CM D) OVERALL FREQUENCY RESPONSE: 27HZ-140HZ

SEE SPECIFICATIONS FOR MORE DETAILED PRODUCT INFORMATION.







CSW100



# DYNAMIC BALANCE®

Advanced laser imaging technology allowed Polk Audio engineers to see the entire vibrating surface of a driver and tweeter; they could actually see the resonance develop on the speaker cones—resonance that is the root cause of loudspeaker distortion (A). Being able to see the resonance develop, they determined the "Dynamic Balance" of high-tech materials, geometry and construction that effectively tune out the offending resonance (B). Exclusive Dynamic Balance Composite Material Technology delivers sound Ithat's effortlessly clean and clear, even at lifelike volume. See more about Dynamic Balance at www.polkaudio.com/catalog/technology/.







CSW100



CSW200

#### **SWA500 AMPLIFIER**

All three subwoofers are powered by an external Class D amplifier, the SWA500. It produces 500W Continuous into 4 Ohms. The BASH amplifier combines the fidelity of conventional Class A/B amplifiers with the efficiency of Class D amplifiers. The bottom line is high power, and cool, reliable operation with precise definition and low distortion. Plug-in data cards for each subwoofer, called SPEX Cards, preprogram equalization, infrasonic filter characteristics and power output that best matches the subwoofer being used. Each SPEX Card also has specific power control circuitry tailored to each subwoofer's requirements for an even greater level of reliability. A SPEX Card installs easily, plugging into the back of the amplifier.

- Can power up to two subwoofers.
- Delivers up to 250 Watts to each subwoofer.
- SPEX card ensures optimum performance.
- Front panel level and variable low-pass filter controls.
- Power and protection LEDs.
- Overload protection circuitry.
- Low-level and high-level inputs.
- 2 sets of outputs (for daisy-chain connection to additional amplifiers).
- Phase switch.
- Auto On/Off switch.



SWA500 (front)



SWA500 (back)



CUSTOM INSTALL BUILT-IN SUBWOOFER	CSW155	CSW200	CSW100
Frequency Response/-3dB	30Hz-140Hz / 36Hz-120Hz	22Hz-140Hz / 28Hz-120Hz	27Hz-140Hz / 33Hz-120Hz
CEA 2010* Ultra Low / Low	103.9dB / 121.3dB	109.6dB / 121.2dB	103.6dB / 120.4dB
Impedance	8 Ohms	8 Ohms	8 Ohms
Driver Diameter	10"	10"	10"
Enclosure Type	direct radiating slot port	direct radiating, slot vented	HVCD bandpass, slot vented
Accessory	grille	wire mesh grille	plastic molded grate with wire mesh grille
Driver Complement	10" polycomposite	10" polycomposite	10" polycomposite with slot load vent
Dimensions	60" L x 14" W x 3 3/8" D	34 1/8" L x 13" W x 9" D	26 1/4" L x 13" W x 9" D
	152.4cm H x 35.56cm W x 8.57cm D	86.68cm H x 33.02cm W x 22.86cm D	66.68cm H x 33.02cm W x 22.86cm D
Grille Size	15 1/2" x 17 1/2" (39.37cm x 44.45cm)	12" x 12" (30.48cm x 30.48cm)	3" x 12" (7.62cm x 30.48cm)
Product Weight / Shipping Weight	36 lbs / 53 lbs	48 lbs / 52.9 lbs	33 lbs / 39.4 lbs
	(16.33 kg / 24 kg)	(21.8 kg / 24 kg)	(15 kg / 17.9 kg)

CUSTOM INSTALL BUILT-IN SUBWOOFER AMPLIFIER	SWA500
Power Continuous	500W @ 4 Ohms; 250 Watts @ 8 Ohms
Power Peak	800W @ 4 0hms
Bandwidth	15Hz - 250Hz
Distortion	0.01%
Crossover Frequency Range	40Hz - 120Hz
Accessories	SPEX Cards, rack ears
Dimensions	17" W x 3 1/2" H x 12 5/8" D

<sup>\*</sup> For an explanation of CEA 2010 go to Http://www.polkaudio.com/partners/paper.php?id=12

We're fanatics when it comes to providing you useful, accurate information that can help you evaluate our products. But as we all know, we live in an imperfect world. At least some of us do. That's why performance specifications and product dimensions are subject to change without notice. For the most current specifications see our website, www.polkaudio.com/home.

Polk Audio is a Directed Electronics company which trades on NASDAQ under the symbol DEIX. Investor information can be found at http://investor.directed.com.

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